Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S21	3	345/426.ccls. and (parametric same texture same viewpoint)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:20
L4	0	345/619.ccls. and (parametric same texture same viewpoint)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:20
S55	1	382/285.ccls. and (PTM or (parametric near7 map$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:19
S46	1	345/552.ccls. and (PTM or (parametric near7 map$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:19
L2	1	345/619.ccls. and (PTM or (parametric near7 map$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:19
S77	8	345/423.ccls. and (parametric near7 (select$3 or chos$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:18
L1	4	345/619.ccls. and (parametric near7 (select$3 or chos$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/30 11:18
S90	6	S89 and distance	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/29 15:05
S89	12	(US-20040096120-$).did. or (US-5446833-$ or US-5561756-$ or US-6108006-$ or US-6417860-$ or US-6515674-$ or US-6525731-$ or US-6583790-$ or US-6654013-$ or US-6822658-$).did. or (US-6078332-$ or US-6163320-$).did.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/29 15:05

S88	1	((select$3 or chos$3) adj (texture adj map)) same (luminosity or intensity or lighting)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 14:58
S87	20	345/426.ccls. and (texture same parametric)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 14:57
S86	17	S85 and (texture adj map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 14:20
S85	2006	(non adj parametric)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 14:11
S63	7	((texture) same (curv$5 or parametric)) and (distance same viewpoint same angle)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 14:10
S83	26	S82 and (curv$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 10:19
S82	79	S81 and surface	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 10:19
S81	114	((select$3 or chos$3) adj3 (texture adj map))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 10:01
S73	0	((select$3 or chos$3) adj3 (texture adj map)) same parametric	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 10:00
S80	0	345/587.ccls. and (parametric near7 (select$3 or chos$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:56

S79	1	345/586.ccls. and (parametric near7 (select$3 or chos$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:56
S78	1	345/585.ccls. and (parametric near7 (select$3 or chos$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:56
S15	6	345/423.ccls. and (parametric near7 map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:40
S76	22	((select$3 or chos$3) adj3 texture) same (curv$5 or spline)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:26
S75	0	((select$3 or chos$3) adj3 texture) same parametric	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:25
S74	0	((select$3 or chos$3) adj3 (texture adj map)) same (curv$5 or spline)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:25
S72	7	S71 and texture	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:24
S71	19	(S69 or S70) and parametric	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 09:01
S70	72	345/647.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 08:46
S69	63	345/646.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 08:46

S12	384	345/423.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/29 08:46
S67	1	S66 and (viewpoint and angle and (LOD or "level of detail" or "level-of-detail"))	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/21 12:44
S66	11	(US-20040096120-$).did. or (US-5446833-$ or US-5561756-$ or US-6108006-$ or US-6417860-$ or US-6515674-$ or US-6583790-$ or US-6654013-$ or US-6822658-$).did. or (US-6078332-$ or US-6163320-$).did.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/21 09:08
S65	68	S64 and (curv$4 or curvature or arc)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/21 08:26
S64	229	((select$3 or chos$3) near7 (texture adj map))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/21 08:26
S62	14	((chos$3 near5 texture) same (curv$5 or parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/21 08:02
S61	57	((select$3 near5 texture) same (curv$5 or parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 14:55
S52	7	((select$3 near5 map$4) near3 texture) same (curv$5 or parametric)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 14:55
S60	2	"6115050".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/20 14:24
S59	8	S57 and angle	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/20 14:24
S58	5	S57 and (viewpoint)	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/20 14:20

S57	11	(US-20040096120-$).did. or (US-5561756-$ or US-6108006-$ or US-6417860-$ or US-6515674-$ or US-6583790-$ or US-6654013-$ or US-5446833-$ or US-6822658-$).did. or (US-6078332-$ or US-6163320-$). did.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/20 14:18
S56	2	382/285.ccls. and ((curve or curvature) near7 map$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 11:51
S54	0	382/285.ccls. and ((select$3 near5 map$3) same (curv$3 or parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 11:49
S53	175	382/285.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 11:49
S51	78	345/639.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 11:10
S50	0	345/582.ccls. and ((LOD or "level of detail" or "level-of-detail") same (parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:38
S40	62	345/586.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:38
S39	86	345/587.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:38
S49	0	345/587.ccls. and ((LOD or "level of detail" or "level-of-detail") same (parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:36

S48	0	345/552.ccls. and ((LOD or "level of detail" or "level-of-detail") same (parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:36
S47	3	345/552.ccls. and (curv$3 near5 map$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:35
S45	147	345/552.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:30
S44	2	345/582.ccls. and ((select$3 near5 map$3) same (curv$3 or parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:30
S43	0	(S38 or S39 or S40) and ((select$3 near5 map$3) same (curv$3 or parametric))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:28
S42	3	(S38 or S39 or S40) and ((curve or curvature) near7 map$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:27
S41	7	(S38 or S39 or S40) and (PTM or (parametric near7 map$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:20
S38	28	345/585.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:18
S34	36	345/582.ccls. and ((curv$3 or curvature) near7 map$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/20 10:18
S37	5	345/582.ccls. and ((curv$3 or curvature) same (select$3 near3 map$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 15:03

S36	2	"09505337"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:46
S33	12	345/582.ccls. and (PTM)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:44
S31	15	345/582.ccls. and (parametric near5 map$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:42
S32	13	S31 and select$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:41
S30	645	345/582.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:40
S28	43	S26 and (texture near7 (different or various))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 14:40
S29	8	S26 and (texture near7 (different or various)) and parametric	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:48
S27	98	S26 and texture	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:46
S26	156	(345/423.ccls. or 345/426.ccls or 345/428) and (select$3 near7 map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:45
S23	6	345/428.ccls. and (parametric near7 texture)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:44

S25	0	345/428.ccls. and (parametric same texture same viewpoint)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:43
S24	3	345/428.ccls. and (parametric same texture same map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:43
S20	8	345/426.ccls. and (parametric near7 texture)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:38
S22	15	345/426.ccls. and (parametric same texture same map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 13:10
S19	9	345/426.ccls. and (parametric near7 map)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 12:59
S18	567	345/426.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 12:59
S17	1	345/423.ccls. and (parametric same texture same viewpoint)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 12:58
S16	5	345/423.ccls. and (parametric near5 texture)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/16 12:57
S14	0	345/423.ccls. and (parametric near7 version)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/15 14:39
S13	93	345/423.ccls. and (parametric)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/15 14:39

S11	62	(parametric near5 texture)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/15 14:39
S8	10	ritter-bradford-a.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/15 14:20
S9	11	("20020024516" | "20020122043" | "20020131641" | "20030026588" | "5561756" | "5872867" | "6018349" | "6515674" | "6556210" | "6583790" | "6593933").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 13:50
S7	4	horton-noah.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/12/15 13:47
S6	2	"5973701".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/15 13:43
S5	2	"6348917".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/15 13:43
S3	14	"6348917.pn." "6163320".pn. "6078332".pn. "5805782".pn. "6169553".pn. "6037949".pn. "5561756".pn. "6288730".pn. "5805782".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/15 13:42
S4	12	"6417860".pn. "6462747".pn. "6515674".pn. "5943058".pn. "6078332".pn. "6229547".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2004/12/15 10:00

Terms used **parametric texture select viewpoint angle** Found **120** of **147,793**

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Relevance scale

1 View direction, surface orientation and texture orientation for perception of surface shape

Graeme Sweet, Colin Ware

May 2004 **Proceedings of the 2004 conference on Graphics interface**

Full text available: pdf(750.94 KB) Additional Information: full citation, abstract, references

Textures are commonly used to enhance the representation of shape in non-photorealistic rendering applications such as medical drawings. Textures that have elongated linear elements appear to be superior to random textures in that they can, by the way they conform to the surface, reveal the surface shape. We observe that shape following hache marks commonly used in cartography and copper-plate illustration are locally similar to the effect of the lines that can be generated by the intersection o ...

Keywords: shape from texture, surface shape perception, textures, visualization

2 Piecewise surface flattening for non-distorted texture mapping

Chakib Bennis, Jean-Marc Vézien, Gérard Iglésias

July 1991 **ACM SIGGRAPH Computer Graphics , Proceedings of the 18th annual conference on Computer graphics and interactive techniques**, Volume 25 Issue 4

Full text available: pdf(4.35 MB) Additional Information: full citation, abstract, references, citings, index terms

This paper introduces new techniques for interactive piecewise flattening of parametric 3-D surfaces, leading to a non-distorted, hence realistic, texture mapping. Cuts are allowed on the mapped texture and we make a compromise between discontinuities and distortions. These techniques are based on results from differential geometry, more precisely on the notion of "**geodesic curvature**": isoparametric curves of the surface are mapped, in a constructive way, onto curves in the texture plane ...

Keywords: differential geometry, geodesic curvature, non distorted texture mapping, piecewise surface flattening

3 Face recognition: A literature survey

W. Zhao, R. Chellappa, P. J. Phillips, A. Rosenfeld

December 2003 **ACM Computing Surveys (CSUR)**, Volume 35 Issue 4

Full text available: pdf(4.28 MB) Additional Information: full citation, abstract, references, index terms

As one of the most successful applications of image analysis and understanding, face recognition has recently received significant attention, especially during the past several years. At least two reasons account for this trend: the first is the wide range of commercial and law enforcement applications, and the second is the availability of feasible technologies after 30 years of research. Even though current machine recognition systems have reached a certain level of maturity, their success is ...

Keywords: Face recognition, person identification

4 Synthesizing bidirectional texture functions for real-world surfaces

Xinguo Liu, Yizhou Yu, Heung-Yeung Shum

August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(4.30 MB) Additional Information: full citation, abstract, references, citings, index terms

In this paper, we present a novel approach to synthetically generating bidirectional texture functions (BTFs) of real-world surfaces. Unlike a conventional two-dimensional texture, a BTF is a six-dimensional function that describes the appearance of texture as a function of illumination and viewing directions. The BTF captures the appearance change caused by visible small-scale geometric details on surfaces. From a sparse set of images under different viewing/lighting settings, our approach g ...

Keywords: bidirectional texture functions, image-based rendering, photometric stereo, reflectance and shading models, shape-from-shading, texture synthesis

5 Texture mapping 3D models of real-world scenes

Frederick M. Weinhaus, Venkat Devarajan

December 1997 **ACM Computing Surveys (CSUR)**, Volume 29 Issue 4

Full text available: pdf(1.98 MB) Additional Information: full citation, abstract, references, index terms, review

Texture mapping has become a popular tool in the computer graphics industry in the last few years because it is an easy way to achieve a high degree of realism in computer-generated imagery with very little effort. Over the last decade, texture-mapping techniques have advanced to the point where it is possible to generate real-time perspective simulations of real-world areas by texture mapping every object surface with texture from photographic images of these real-world areas. The techniqu ...

Keywords: anti-aliasing, height field, homogeneous coordinates, image perspective transformation, image warping, multiresolution data, perspective projection, polygons, ray tracing, real-time scene generation, rectification, registration, texture mapping, visual simulators, voxels

6 View planning for automated three-dimensional object reconstruction and inspection

William R. Scott, Gerhard Roth, Jean-François Rivest

March 2003 **ACM Computing Surveys (CSUR)**, Volume 35 Issue 1

Full text available: pdf(517.25 KB) Additional Information: full citation, abstract, references, index terms

Laser scanning range sensors are widely used for high-precision, high-density three-dimensional (3D) reconstruction and inspection of the surface of physical objects. The process typically involves planning a set of views, physically altering the relative object-sensor pose, taking scans, registering the acquired geometric data in a common coordinate frame of reference, and finally integrating range images into a nonredundant model. Efficiencies could be achieved by automating or semiautomating ...

Keywords: View planning, object inspection, object reconstruction, range images

7 Three-dimensional object recognition

Paul J. Besl, Ramesh C. Jain

March 1985 **ACM Computing Surveys (CSUR)**, Volume 17 Issue 1

Full text available: pdf(7.76 MB) Additional Information: full citation, abstract, references, citings, index terms, review

A general-purpose computer vision system must be capable of recognizing three-

dimensional (3-D) objects. This paper proposes a precise definition of the 3-D object recognition problem, discusses basic concepts associated with this problem, and reviews the relevant literature. Because range images (or depth maps) are often used as sensor input instead of intensity images, techniques for obtaining, processing, and characterizing range data are also surveyed.

8 Computational strategies for object recognition

Paul Suetens, Pascal Fua, Andrew J. Hanson

March 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 1

Full text available: pdf(6.37 MB) Additional Information: full citation, abstract, references, citings, index terms, review

This article reviews the available methods for automated identification of objects in digital images. The techniques are classified into groups according to the nature of the computational strategy used. Four classes are proposed: (1) the simplest strategies, which work on data appropriate for feature vector classification, (2) methods that match models to symbolic data structures for situations involving reliable data and complex models, (3) approaches that fit models to the photometry and ...

Keywords: image understanding, model-based vision, object recognition

9 A survey of image registration techniques

Lisa Gottesfeld Brown

December 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 4

Full text available: pdf(5.20 MB) Additional Information: full citation, abstract, references, citings, index terms, review

Registration is a fundamental task in image processing used to match two or more pictures taken, for example, at different times, from different sensors, or from different viewpoints. Virtually all large systems which evaluate images require the registration of images, or a closely related operation, as an intermediate step. Specific examples of systems where image registration is a significant component include matching a target with a real-time image of a scene for target recognition, mon ...

Keywords: image registration, image warping, rectification, template matching

10 Session D: Geometry: View-dependent refinement of multiresolution meshes with subdivision connectivity

Daniel I. Azuma, Daniel N. Wood, Brian Curless, Tom Duchamp, David H. Salesin, Werner Stuetzle

February 2003 **Proceedings of the 2nd international conference on Computer graphics, virtual Reality, visualisation and interaction in Africa**

Full text available: pdf(3.07 MB) Additional Information: full citation, abstract, references, index terms

We present a view-dependent level-of-detail algorithm for triangle meshes with subdivision connectivity. The algorithm is more suitable for textured meshes of arbitrary topology than existing progressive mesh-based schemes. It begins with a wavelet decomposition of the mesh, and, per frame, finds a partial sum of wavelets necessary for high-quality renderings from that frame's viewpoint. We present a screen-space error metric that measures both geometric and texture deviation and tends to outper ...

Keywords: level-of-detail, multiresolution representations, view-dependent refinement, wavelets

11 Content analysis: A mid-level representation framework for semantic sports video analysis

Ling-Yu Duan, Min Xu, Tat-Seng Chua, Qi Tian, Chang-Sheng Xu

November 2003 **Proceedings of the eleventh ACM international conference on Multimedia**

Full text available: pdf(1.42 MB) Additional Information: full citation, abstract, references, index terms

Sports video has been widely studied due to its tremendous commercial potentials. Despite encouraging results from various specific sports games, it is almost impossible to extend a system for a new sports game because they usually employ different sets of low-level features appropriate for the specific games and closely coupled with the use of game specific rules to detect events or highlights. There is a lack of internal representation and structure to be generic and applicable for many differ ...

Keywords: events, mid-level representation, semantics, sports video

12 Video textures

Arno Schödl, Richard Szeliski, David H. Salesin, Irfan Essa

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(1.20 MB) Additional Information: full citation, abstract, references, citings, index terms

This paper introduces a new type of medium, called a video texture, which has qualities somewhere between those of a photograph and a video. A video texture provides a continuous infinitely varying stream of images. While the individual frames of a video texture may be repeated from time to time, the video sequence as a whole is never repeated exactly. Video textures can be used in place of digital photos to infuse a static image with dynamic qualities and explicit actions. ...

Keywords: animation, image-based rendering, morphing, multimedia, natural phenomena, texture synthesis, video sprites, video-based animation, video-based rendering, view morphing

13 Steerable illumination textures

Michael Ashikhmin, Peter Shirley

January 2002 **ACM Transactions on Graphics (TOG)**, Volume 21 Issue 1

Full text available: pdf(4.52 MB) Additional Information: full citation, abstract, references, citings, index terms

We introduce a new set of illumination basis functions designed for lighting bumpy surfaces. This lighting includes shadowing and interreflection. To create an image with a new light direction, only a linear combination of precomputed textures is required. This is possible by using a carefully selected set of steerable basis functions. Steerable basis lights have the property that they allow lights to move continuously without jarring visual artifacts. The new basis lights are shown to produce i ...

Keywords: Bump mapping, displacement mapping, relighting, steerable functions, textures

14 Technical session 8: compression, streaming, and retrival of 3D objects: FQM: a fast quality measure for efficient transmission of textured 3D models

Dihong Tian, Ghassan AlRegib

October 2004 **Proceedings of the 12th annual ACM international conference on Multimedia**

Full text available: pdf(1.04 MB) Additional Information: full citation, abstract, references, index terms

In this paper, we propose an efficient transmission method to stream textured 3D models. We develop a bit-allocation algorithm that distributes the bit budget between the geometry and the mapped texture to maximize the quality of the model displayed on the client's screen. Both the geometry and the texture are progressively and independently compressed. The resolutions for the geometry and the texture are selected to maximize the quality for a given bitrate. We further propose a novel and fas ...

Keywords: 3D model, bit-allocation, geometry, quality measure, texture

15 Non-photorealistic virtual environments

Allison W. Klein, Wilmot Li, Michael M. Kazhdan, Wagner T. Corrêa, Adam Finkelstein, Thomas A. Funkhouser

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(5.48 MB) Additional Information: full citation, abstract, references, citings, index terms

We describe a system for non-photorealistic rendering (NPR) of virtual environments. In real time, it synthesizes imagery of architectural interiors using stroke-based textures. We address the four main challenges of such a system — interactivity, visual detail, controlled stroke size, and frame-to-frame coherence — through image based rendering (IBR) methods. In a preprocessing stage, we capture photos of a real or synthetic environment, map the photos to a coarse model of the ...

Keywords: image-based rendering, interactive virtual environments, non-photorealistic rendering, texture mapping

16 Model-based object recognition in dense-range images—a review

Farshid Arman, J. K. Aggarwal

March 1993 **ACM Computing Surveys (CSUR)**, Volume 25 Issue 1

Full text available: pdf(3.42 MB) Additional Information: full citation, abstract, references, citings, index terms, review

The goal in computer vision systems is to analyze data collected from the environment and derive an interpretation to complete a specified task. Vision system tasks may be divided into data acquisition, low-level processing, representation, model construction, and matching subtasks. This paper presents a comprehensive survey of model-based vision systems using dense-range images. A comprehensive survey of the recent publications in each subtask pertaining to dense-range image object recogni ...

Keywords: 3D object recognition, 3D representations, CAD-based vision, dense-range images, image understanding

17 Image-based modeling and photo editing

Byong Mok Oh, Max Chen, Julie Dorsey, Frédo Durand

August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(4.01 MB) Additional Information: full citation, abstract, references, citings, index terms

We present an image-based modeling and editing system that takes a single photo as input. We represent a scene as a layered collection of depth images, where each pixel encodes both color and depth. Starting from an input image, we employ a suite of user-assisted techniques, based on a painting metaphor, to assign depths and extract layers. We introduce two specific editing operations. The first, a "clone brushing tool," permits the distortion-free copying of parts of a picture, b ...

18 Three-dimensional medical imaging: algorithms and computer systems

M. R. Stytz, G. Frieder, O. Frieder

December 1991 **ACM Computing Surveys (CSUR)**, Volume 23 Issue 4

Full text available: pdf(7.38 MB) Additional Information: full citation, references, citings, index terms, review

Keywords: Computer graphics, medical imaging, surface rendering, three-dimensional imaging, volume rendering

19 Modeling and rendering architecture from photographs: a hybrid geometry- and image-

based approach
Paul E. Debevec, Camillo J. Taylor, Jitendra Malik
August 1996 **Proceedings of the 23rd annual conference on Computer graphics and interactive techniques**
Full text available: pdf(251.64 KB) Additional Information: full citation, references, citings, index terms

20 Interactive multiresolution hair modeling and editing
Tae-Yong Kim, Ulrich Neumann
July 2002 **ACM Transactions on Graphics (TOG) , Proceedings of the 29th annual conference on Computer graphics and interactive techniques**, Volume 21 Issue 3
Full text available: pdf(9.63 MB) Additional Information: full citation, abstract, references, citings, index terms

Human hair modeling is a difficult task. This paper presents a constructive hair modeling system with which users can sculpt a wide variety of hairstyles. Our Multiresolution Hair Modeling (MHM) system is based on the observed tendency of adjacent hair strands to form clusters at multiple scales due to static attraction. In our system, initial hair designs are quickly created with a small set of hair clusters. Refinements at finer levels are achieved by subdividing these initial hair clusters. U ...

Keywords: generalized cylinders, hair modeling, hair rendering, level of detail, multiresolution modeling

Terms used **parametric texture map select viewpoint angle** Found **84** of **147,793**

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1 Three-dimensional object recognition

Paul J. Besl, Ramesh C. Jain

March 1985 **ACM Computing Surveys (CSUR)**, Volume 17 Issue 1

Full text available: pdf(7.76 MB) Additional Information: full citation, abstract, references, citings, index terms, review

A general-purpose computer vision system must be capable of recognizing three-dimensional (3-D) objects. This paper proposes a precise definition of the 3-D object recognition problem, discusses basic concepts associated with this problem, and reviews the relevant literature. Because range images (or depth maps) are often used as sensor input instead of intensity images, techniques for obtaining, processing, and characterizing range data are also surveyed.

2 Texture mapping 3D models of real-world scenes

Frederick M. Weinhaus, Venkat Devarajan

December 1997 **ACM Computing Surveys (CSUR)**, Volume 29 Issue 4

Full text available: pdf(1.98 MB) Additional Information: full citation, abstract, references, index terms, review

Texture mapping has become a popular tool in the computer graphics industry in the last few years because it is an easy way to achieve a high degree of realism in computer-generated imagery with very little effort. Over the last decade, texture-mapping techniques have advanced to the point where it is possible to generate real-time perspective simulations of real-world areas by texture mapping every object surface with texture from photographic images of these real-world areas. The techniqu ...

Keywords: anti-aliasing, height field, homogeneous coordinates, image perspective transformation, image warping, multiresolution data, perspective projection, polygons, ray tracing, real-time scene generation, rectification, registration, texture mapping, visual simulators, voxels

3 Piecewise surface flattening for non-distorted texture mapping

Chakib Bennis, Jean-Marc Vézien, Gérard Iglésias

July 1991 **ACM SIGGRAPH Computer Graphics , Proceedings of the 18th annual conference on Computer graphics and interactive techniques**, Volume 25 Issue 4

Full text available: pdf(4.35 MB) Additional Information: full citation, abstract, references, citings, index terms

This paper introduces new techniques for interactive piecewise flattening of parametric 3-D surfaces, leading to a non-distorted, hence realistic, texture mapping. Cuts are allowed on the mapped texture and we make a compromise between discontinuities and distortions. These techniques are based on results from differential geometry, more precisely on the notion of "**geodesic curvature**": isoparametric curves of the surface are mapped, in a constructive way, onto curves in the texture plane ...

Keywords: differential geometry, geodesic curvature, non distorted texture mapping, piecewise surface flattening

4 A survey of image registration techniques

Lisa Gottesfeld Brown

December 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 4

Full text available: pdf(5.20 MB) Additional Information: full citation, abstract, references, citings, index terms, review

Registration is a fundamental task in image processing used to match two or more pictures taken, for example, at different times, from different sensors, or from different viewpoints. Virtually all large systems which evaluate images require the registration of images, or a closely related operation, as an intermediate step. Specific examples of systems where image registration is a significant component include matching a target with a real-time image of a scene for target recognition, mon ...

Keywords: image registration, image warping, rectification, template matching

5 Computational strategies for object recognition

Paul Suetens, Pascal Fua, Andrew J. Hanson

March 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 1

Full text available: pdf(6.37 MB) Additional Information: full citation, abstract, references, citings, index terms, review

This article reviews the available methods for automated identification of objects in digital images. The techniques are classified into groups according to the nature of the computational strategy used. Four classes are proposed: (1) the simplest strategies, which work on data appropriate for feature vector classification, (2) methods that match models to symbolic data structures for situations involving reliable data and complex models, (3) approaches that fit models to the photometry and ...

Keywords: image understanding, model-based vision, object recognition

6 Synthesizing bidirectional texture functions for real-world surfaces

Xinguo Liu, Yizhou Yu, Heung-Yeung Shum

August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(4.30 MB) Additional Information: full citation, abstract, references, citings, index terms

In this paper, we present a novel approach to synthetically generating bidirectional texture functions (BTFs) of real-world surfaces. Unlike a conventional two-dimensional texture, a BTF is a six-dimensional function that describes the appearance of texture as a function of illumination and viewing directions. The BTF captures the appearance change caused by visible small-scale geometric details on surfaces. From a sparse set of images under different viewing/lighting settings, our approach g ...

Keywords: bidirectional texture functions, image-based rendering, photometric stereo, reflectance and shading models, shape-from-shading, texture synthesis

7 Non-photorealistic virtual environments

Allison W. Klein, Wilmot Li, Michael M. Kazhdan, Wagner T. Corrêa, Adam Finkelstein, Thomas A. Funkhouser

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(5.48 MB) Additional Information: full citation, abstract, references, citings, index terms

We describe a system for non-photorealistic rendering (NPR) of virtual environments. In real time, it synthesizes imagery of architectural interiors using stroke-based textures. We address the four main challenges of such a system — interactivity, visual detail, controlled stroke size, and frame-to-frame coherence — through image based rendering (IBR) methods. In a preprocessing stage, we capture photos of a real or synthetic environment, map the photos to a coarse model of the ...

Keywords: image-based rendering, interactive virtual environments, non-photorealistic rendering, texture mapping

8 Synthesizing realistic facial expressions from photographs 

Frédéric Pighin, Jamie Hecker, Dani Lischinski, Richard Szeliski, David H. Salesin

July 1998 **Proceedings of the 25th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(276.04 KB) Additional Information: full citation, references, citings, index terms

Keywords: facial animation, facial expression generation, facial modeling, morphing, photogrammetry, view-dependent texture-mapping

9 Face recognition: A literature survey 

W. Zhao, R. Chellappa, P. J. Phillips, A. Rosenfeld

December 2003 **ACM Computing Surveys (CSUR)**, Volume 35 Issue 4

Full text available: pdf(4.28 MB) Additional Information: full citation, abstract, references, index terms

As one of the most successful applications of image analysis and understanding, face recognition has recently received significant attention, especially during the past several years. At least two reasons account for this trend: the first is the wide range of commercial and law enforcement applications, and the second is the availability of feasible technologies after 30 years of research. Even though current machine recognition systems have reached a certain level of maturity, their success is ...

Keywords: Face recognition, person identification

10 Content analysis: A mid-level representation framework for semantic sports video analysis 

Ling-Yu Duan, Min Xu, Tat-Seng Chua, Qi Tian, Chang-Sheng Xu

November 2003 **Proceedings of the eleventh ACM international conference on Multimedia**

Full text available: pdf(1.42 MB) Additional Information: full citation, abstract, references, index terms

Sports video has been widely studied due to its tremendous commercial potentials. Despite encouraging results from various specific sports games, it is almost impossible to extend a system for a new sports game because they usually employ different sets of low-level features appropriate for the specific games and closely coupled with the use of game specific rules to detect events or highlights. There is a lack of internal representation and structure to be generic and applicable for many differ ...

Keywords: events, mid-level representation, semantics, sports video

11 Session D: Geometry: View-dependent refinement of multiresolution meshes with subdivision connectivity 

Daniel I. Azuma, Daniel N. Wood, Brian Curless, Tom Duchamp, David H. Salesin, Werner Stuetzle

February 2003 **Proceedings of the 2nd international conference on Computer graphics, virtual Reality, visualisation and interaction in Africa**

Full text available: pdf(3.07 MB) Additional Information: full citation, abstract, references, index terms

We present a view-dependent level-of-detail algorithm for triangle meshes with subdivision connectivity. The algorithm is more suitable for textured meshes of arbitrary topology than existing progressive mesh-based schemes. It begins with a wavelet decomposition of the mesh, and, per frame, finds a partial sum of wavelets necessary for high-quality renderings from that frame's viewpoint. We present a screen-space error metric that measures both geometric and texture deviation and tends to outper ...

Keywords: level-of-detail, multiresolution representations, view-dependent refinement, wavelets

12 Synthesis of bidirectional texture functions on arbitrary surfaces

Xin Tong, Jingdan Zhang, Ligang Liu, Xi Wang, Baining Guo, Heung-Yeung Shum

July 2002 **ACM Transactions on Graphics (TOG) , Proceedings of the 29th annual conference on Computer graphics and interactive techniques**, Volume 21 Issue 3

Full text available: pdf(14.75 MB) Additional Information: full citation, abstract, references, citings, index terms

The bidirectional texture function (BTF) is a 6D function that can describe textures arising from both spatially-variant surface reflectance and surface mesostructures. In this paper, we present an algorithm for synthesizing the BTF on an arbitrary surface from a sample BTF. A main challenge in surface BTF synthesis is the requirement of a consistent mesostructure on the surface, and to achieve that we must handle the large amount of data in a BTF sample. Our algorithm performs BTF synthesis bas ...

Keywords: 3D textons, bidirectional texture function, reflectance and shading models, surfaces, texture mapping, texture synthesis

13 Acquiring the reflectance field of a human face

Paul Debevec, Tim Hawkins, Chris Tchou, Haarm-Pieter Duiker, Westley Sarokin, Mark Sagar

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(3.70 MB) Additional Information: full citation, abstract, references, citings, index terms

We present a method to acquire the reflectance field of a human face and use these measurements to render the face under arbitrary changes in lighting and viewpoint. We first acquire images of the face from a small set of viewpoints under a dense sampling of incident illumination directions using a light stage. We then construct a reflectance function image for each observed image pixel from its values over the space of illumination directions. From the reflectance functions, we can directl ...

Keywords: facial animation, image-based modeling, rendering and lighting

14 Model-based object recognition in dense-range images—a review

Farshid Arman, J. K. Aggarwal

March 1993 **ACM Computing Surveys (CSUR)**, Volume 25 Issue 1

Full text available: pdf(3.42 MB) Additional Information: full citation, abstract, references, citings, index terms, review

The goal in computer vision systems is to analyze data collected from the environment and derive an interpretation to complete a specified task. Vision system tasks may be divided into data acquisition, low-level processing, representation, model construction, and matching subtasks. This paper presents a comprehensive survey of model-based vision systems using dense-range images. A comprehensive survey of the recent publications in each subtask pertaining to dense-range image object recogni ...

Keywords: 3D object recognition, 3D representations, CAD-based vision, dense-range images, image understanding

Steerable illumination textures
Michael Ashikhmin, Peter Shirley
January 2002 **ACM Transactions on Graphics (TOG)**, Volume 21 Issue 1

Full text available: pdf(4.52 MB) Additional Information: full citation, abstract, references, citings, index terms

We introduce a new set of illumination basis functions designed for lighting bumpy surfaces. This lighting includes shadowing and interreflection. To create an image with a new light direction, only a linear combination of precomputed textures is required. This is possible by using a carefully selected set of steerable basis functions. Steerable basis lights have the property that they allow lights to move continuously without jarring visual artifacts. The new basis lights are shown to produce i ...

Keywords: Bump mapping, displacement mapping, relighting, steerable functions, textures

16 Modeling and rendering architecture from photographs: a hybrid geometry- and image-based approach
Paul E. Debevec, Camillo J. Taylor, Jitendra Malik
August 1996 **Proceedings of the 23rd annual conference on Computer graphics and interactive techniques**

Full text available: pdf(251.64 KB) Additional Information: full citation, references, citings, index terms

17 Texture mapping progressive meshes
Pedro V. Sander, John Snyder, Steven J. Gortler, Hugues Hoppe
August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(5.18 MB) Additional Information: full citation, abstract, references, citings, index terms

Given an arbitrary mesh, we present a method to construct a progressive mesh (PM) such that all meshes in the PM sequence share a common texture parametrization. Our method considers two important goals simultaneously. It minimizes texture stretch (small texture distances mapped onto large surface distances) to balance sampling rates over all locations and directions on the surface. It also minimizes texture deviation ("slippage" error based on parametric correspondence) to obtain ...

Keywords: mesh simplification, surface flattening, surface parametrization, texture stretch

18 Layered depth images
Jonathan Shade, Steven Gortler, Li-wei He, Richard Szeliski
July 1998 **Proceedings of the 25th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(584.98 KB) Additional Information: full citation, references, citings, index terms

19 Session 5: simplification and meshes: Perceptually guided simplification of lit, textured meshes
Nathaniel Williams, David Luebke, Jonathan D. Cohen, Michael Kelley, Brenden Schubert
April 2003 **Proceedings of the 2003 symposium on Interactive 3D graphics**

Full text available: pdf(5.78 MB) Additional Information: full citation, abstract, references, index terms

We present a new algorithm for best-effort simplification of polygonal meshes based on principles of visual perception. Building on previous work, we use a simple model of low-level human vision to estimate the perceptibility of local simplification operations in a view-dependent Multi-Triangulation structure. Our algorithm improves on prior perceptual simplification approaches by accounting for textured models and dynamic lighting effects.

We also model more accurately the scale of visual chang ...

Keywords: level of detail, mesh simplification, perceptually motivated rendering

20 Relief texture mapping

Manuel M. Oliveira, Gary Bishop, David McAllister

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(1.58 MB) Additional Information: full citation, abstract, references, citings, index terms

We present an extension to texture mapping that supports the representation of 3-D surface details and view motion parallax. The results are correct for viewpoints that are static or moving, far away or nearby. Our approach is very simple: a relief texture (texture extended with an orthogonal displacement per texel) is mapped onto a polygon using a two-step process: First, it is converted into an ordinary texture using a surprisingly simple 1-D forward transform. The result ...

Keywords: image-based rendering, range images, rendering, texture mapping

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1 **Lightweight face relighting**
Paris, S.; Sillion, F.X.; Quan, L.;
Computer Graphics and Applications, 2003. Proceedings. 11th Pacific Conference on , 8-10 Oct. 2003
Pages:41 - 50

[Abstract] [PDF Full-Text (523 KB)] **IEEE CNF**

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2 **Time-variable-parametric relaxation labeling and its application in texture segmentation**
Hun-Tao Qian; Qi Wang; Suen, C.Y.;
Machine Learning and Cybernetics, 2002. Proceedings. 2002 International Conference on , Volume: 1 , 4-5 Nov. 2002
Pages:486 - 491 vol.1

[Abstract] [PDF Full-Text (532 KB)] **IEEE CNF**

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3 **Empirical calibration method for adding colour to range images**
Robertson, C.; Fisher, R.B.;
3D Data Processing Visualization and Transmission, 2002. Proceedings. First International Symposium on , 19-21 June 2002
Pages:558 - 561

[Abstract] [PDF Full-Text (478 KB)] **IEEE CNF**

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4 **Size preserving pattern mapping**
Kurzion, Y.; Moller, T.; Yagel, R.;
Visualization '98. Proceedings , 18-23 Oct. 1998
Pages:367 - 373, 552

[Abstract] [PDF Full-Text (996 KB)] **IEEE CNF**

Terms used
parametric texture map viewpoint angle distance LOD curve curvature

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1 Session 5: simplification and meshes: Perceptually guided simplification of lit, textured meshes

Nathaniel Williams, David Luebke, Jonathan D. Cohen, Michael Kelley, Brenden Schubert

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Keywords: level of detail, mesh simplification, perceptually motivated rendering

2 View-dependent refinement of progressive meshes

Hugues Hoppe

August 1997 **Proceedings of the 24th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(801.54 KB) Additional Information: full citation, references, citings, index terms

Keywords: dynamic tessellation, level-of-detail, mesh simplification, multiresolution representations, shape interpolation

3 Silhouette clipping

Pedro V. Sander, Xianfeng Gu, Steven J. Gortler, Hugues Hoppe, John Snyder

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(6.31 MB) Additional Information: full citation, abstract, references, citings, index terms

Approximating detailed with coarse, texture-mapped meshes results in polygonal silhouettes. To eliminate this artifact, we introduce silhouette clipping, a framework for efficiently clipping the rendering of coarse geometry to the exact silhouette of the original model. The coarse mesh is obtained using progressive hulls, a novel representation with the nesting property required for proper clipping. We describe an improved technique for constructing texture and normal maps over this coarse ...

Keywords: level of detail algorithms, rendering algorithms, texture mapping, triangle decimation

4 Progressive meshes

Hugues Hoppe

August 1996 **Proceedings of the 23rd annual conference on Computer graphics and interactive techniques**

Full text available: pdf(431.00 KB) Additional Information: full citation, references, citings, index terms

Keywords: geometry compression, level of detail, mesh simplification, progressive transmission, shape interpolation

5 A virtual environment and model of the eye for surgical simulation

Mark A. Sagar, David Bullivant, Gordon D. Mallinson, Peter J. Hunter

July 1994 **Proceedings of the 21st annual conference on Computer graphics and interactive techniques**

Full text available: pdf(667.19 KB) ps(8.17 MB) Additional Information: full citation, abstract, references, citings, index terms

An anatomically detailed 3-D computer graphic model of the eye and surrounding face within a virtual environment has been implemented for use in a surgical simulator. The simulator forms part of a teleoperated micro-surgical robotic system being developed for eye surgery. The model has been designed to both visually and mechanically simulate features of the human eye by coupling computer graphic realism with finite element analysis.The paper gives an overview of the system with e ...

6 Texture mapping progressive meshes

Pedro V. Sander, John Snyder, Steven J. Gortler, Hugues Hoppe

August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**

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7 Session D: Geometry: View-dependent refinement of multiresolution meshes with subdivision connectivity

Daniel I. Azuma, Daniel N. Wood, Brian Curless, Tom Duchamp, David H. Salesin, Werner Stuetzle

February 2003 **Proceedings of the 2nd international conference on Computer graphics, virtual Reality, visualisation and interaction in Africa**

Full text available: pdf(3.07 MB) Additional Information: full citation, abstract, references, index terms

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Keywords: level-of-detail, multiresolution representations, view-dependent refinement, wavelets

8 Non-photorealistic virtual environments

Allison W. Klein, Wilmot Li, Michael M. Kazhdan, Wagner T. Corrêa, Adam Finkelstein, Thomas A. Funkhouser

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Keywords: image-based rendering, interactive virtual environments, non-photorealistic rendering, texture mapping

9 Technical session 8: compression, streaming, and retrival of 3D objects: FQM: a fast quality measure for efficient transmission of textured 3D models

Dihong Tian, Ghassan AlRegib

October 2004 **Proceedings of the 12th annual ACM international conference on Multimedia**

Full text available: pdf(1.04 MB) Additional Information: full citation, abstract, references, index terms

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Keywords: 3D model, bit-allocation, geometry, quality measure, texture

10 WYSIWYG NPR: drawing strokes directly on 3D models

Robert D. Kalnins, Lee Markosian, Barbara J. Meier, Michael A. Kowalski, Joseph C. Lee, Philip L. Davidson, Matthew Webb, John F. Hughes, Adam Finkelstein

July 2002 **ACM Transactions on Graphics (TOG) , Proceedings of the 29th annual conference on Computer graphics and interactive techniques**, Volume 21 Issue 3

Full text available: pdf(8.14 MB) Additional Information: full citation, abstract, references, citings, index terms

We present a system that lets a designer directly annotate a 3D model with strokes, imparting a personal aesthetic to the non-photorealistic rendering of the object. The artist chooses a "brush" style, then draws strokes over the model from one or more viewpoints. When the system renders the scene from any new viewpoint, it adapts the number and placement of the strokes appropriately to maintain the original look.

Keywords: interactive techniques, non-photorealism

11 ROAMing terrain: real-time optimally adapting meshes

Mark Duchaineau, Murray Wolinsky, David E. Sigeti, Mark C. Miller, Charles Aldrich, Mark B. Mineev-Weinstein

October 1997 **Proceedings of the 8th conference on Visualization '97**

Full text available: pdf(1.24 MB) Publisher Site Additional Information: full citation, references, citings, index terms

Keywords: frame-to-frame coherence, greedy algorithms, triangle bintree, view-dependent mesh

12 Large scale terrain visualization using the restricted quadtree triangulation 

Renato Pajarola

October 1998 **Proceedings of the conference on Visualization '98**

Full text available: pdf(2.11 MB) Additional Information: full citation, references, citings, index terms

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Keywords: algorithms, computer graphics, terascale visualization, terrain visualization, triangulated surfaces, virtual reality

13 Smooth view-dependent level-of-detail control and its application to terrain rendering 

Hugues Hoppe

October 1998 **Proceedings of the conference on Visualization '98**

Full text available: pdf(1.76 MB) Additional Information: full citation, references, citings, index terms

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